Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Proposals to Permit Reduced Orbital Spacings Between U.S. Direct Broadcast Satellites	)	**Report No. SPB-196**

COMMENTS OF DIRECTV, INC.

DIRECTV, Inc. ("DIRECTV")[1] hereby offers the following comments in connection with the above-captioned *Public Notice*, which seeks comment on various proposals to permit reduced orbital spacings between U.S. DBS satellites in the 12 GHz band.[2] DIRECTV's initial position on the reduced orbital spacing issue is reflected in the Petition for Rulemaking filed by DIRECTV Enterprises, LLC on September 5, 2003 (the "DIRECTV Petition"), which is attached to the *Public Notice* as Exhibit B.

The *DIRECTV Petition* begins where the Commission must begin in any inquiry into reducing the orbital spacing between DBS satellites authorized to serve the United States – by acknowledging that nine-degree orbital spacing has been the cornerstone of the U.S. DBS service since its inception, and that the policy has served both industry and the public extremely well. As the *DIRECTV Petition* observes, billions of dollars have been invested in a deployed satellite infrastructure that provides competition to cable monopolies and extends multichannel video, audio and other innovative services into geographic areas unreached by cable. In a single decade

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[1] DIRECTV is a wholly-owned subsidiary of DIRECTV Enterprises, LLC, a wholly-owned subsidiary of Hughes Electronics Corporation ("Hughes") and a Commission licensee in the direct broadcast satellite ("DBS") service. Internationally, DBS is known as the broadcasting satellite service ("BSS") and the terms are used interchangeably in these comments.

since the launch of the first U.S. DBS satellite, the service has grown to serve more than 20 million subscribers.

Furthermore, from the standpoint of service growth and innovation, adequate orbital spacing has allowed U.S. DBS operators in recent years to deploy high-power satellites that incorporate spot-beam technology, which enables them to offer satellite-delivered local broadcast channels, thereby fostering increased competition with incumbent cable television operators. Such spacing could become even more critical as U.S. DBS operators continue to innovate to increase capacity by deploying additional spot-beam satellites; implementing higher order modulation and coding; and rolling out new services, such as high-definition television ("HDTV") programming and interactive services. Indeed, on this score, the prospect of such benefits being realized in the near term is not speculative – they are being actively pursued by DIRECTV as the highest of priorities. For example, as a result of the Commission's recent approval of the transaction between Hughes and The News Corporation, Ltd., DIRECTV must offer local-into-local service in a total of 130 designated market areas ("DMAs") across the United States by the end of this year, and DIRECTV intends to serve the entire country with local channel service within the 2006-2008 time frame.[3] The use of additional nine degree-spaced spot-beam or CONUS satellites will be critical to achieving that goal.[4]

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[2] U.S. DBS systems uplink programming utilizing the 17.3-17.8 GHz frequency bands, and downlink programming from DBS satellites to consumers utilizing the 12.2-12.7 GHz band ("12 GHz band").

[3] *See* In the Matter of General Motors Corporation and Hughes Electronics Corporation and The News Corporation Limited, *Memorandum Opinion and Order*, MB Docket No. 03-124 (rel. Jan. 14, 2004) ("Hughes-News Corp Decision"), at ¶¶ 332, 334.

[4] DIRECTV has filed applications to use the Canadian BSS spectrum at 72.5° W.L. licensed to Telesat Canada by the Canadian spectrum licensing authority to provide U.S. domestic DBS service. This demonstrates DIRECTV's continued belief that nine degree orbital spacing is important to maintain for a BSS service in Region 2 where 45 cm dishes are predominant.

Congress has declared its goal of promoting the continued emergence of DBS as a strong competitor to incumbent cable operators, and has given U.S. DBS operators the authority to deliver local broadcast signals to consumers via satellite in order to achieve that goal. Therefore, a key inquiry for the Commission is whether adopting a new BSS orbital spacing plan at 12 GHz would serve the public interest, or would instead jeopardize the public interest benefits of the new regime. In making this determination, the Commission should bear in mind that there is an abundance of FSS Ku and Ka band capacity that could be used to provide direct-to-home ("DTH") video and broadband services, as well as the prospect of future BSS capacity being opened up in the 17 GHz band in 2007.[5] The availability of such capacity could lessen the urgency for the Commission to explore the difficult tradeoffs that the deployment of tweener satellites would entail.

In any event, however, the Commission must examine such questions systematically and with careful study. One of the main points of the *DIRECTV Petition* is one of process: the issue of whether short-spaced "tweener" satellites can be authorized, and if so, their technical characteristics and the spacing that they must observe in order to protect the operations and future growth of deployed U.S. DBS systems, are subjects best addressed in a rulemaking setting and supported by a comprehensive technical record. The decision to move from nine-degree orbital spacing as a matter of U.S. policy should not be effectuated through a series of piecemeal "landing rights" or licensing adjudications or unrelated, "one-off" coordinations with other administrations.

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[5] The Commission has already allocated spectrum for this purpose, effective April 1, 2007. *See Redesignation of the 17.7-19.7 GHz Frequency Band*, 15 FCC Rcd 13430 (2000). DIRECTV currently has applications pending for the use of this spectrum.

For example, SES Americom, Inc. ("SES") has filed a petition for declaratory ruling to provide service to the United States from a proposed U.K.-filed modification to the Region 2 BSS Plan at 105.5° W.L.,[6] in between U.S. assignments at 101° W.L. and 110° W.L. – that is, 4.5 degrees away from five high-power DBS satellites, including one state-of-the-art spot-beam satellite that DIRECTV uses to serve more than 12.2 million U.S. customers. Whatever the claimed benefits of SES's proposal, DIRECTV has shown in its filings in connection with the SES Petition that accommodating SES's specific "tweener" satellite proposed in that filing would reduce significantly current local channel service being provided from DIRECTV satellites and would preclude entirely DIRECTV from deploying *any* additional high-power spot beam satellites to increase local-into-local service coverage.[7] Thus, if SES's satellite were deployed as proposed, the public would be deprived of the benefits of "increased choice, lower prices, or both"[8] as a result of the inability of DIRECTV to provide such expanded local channel service. A rulemaking proceeding will provide the Commission with the fully-developed record necessary to make an informed determination as to whether and on what terms such a tweener satellite could serve the U.S. market consistent with the larger public interest – an analysis that transcends any individual coordination or market access issue.

As to the substance, DIRECTV has identified in the *DIRECTV Petition* certain key public policies that should guide the Commission's decisionmaking process with respect to the introduction of short-spaced DBS satellites at 12 GHz. These are: (1) the protection of existing

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6 *SES Americom, Inc., Petition for Declaratory Ruling To Serve the U.S. Market Using BSS Spectrum from the 105.5° W.L. Orbital Location*, Petition for Declaratory Ruling, SAT-PDR-20020425-00071 at 1 (filed Apr. 25, 2002) ("SES Petition"); *see Public Notice* at 1.

7 DIRECTV incorporates by reference all of its filings made in connection with File No. SAT-PDR-20020425-0071.

8 *Hughes-News Corp. Decision* at ¶ 333.

services and infrastructure investments by operational DBS systems using the 12 GHz band, and (2) the preservation of the technical flexibility required for such operational DBS systems to continue to grow and innovate as they strive to provide vigorous competition to incumbent cable television systems.

This second principle is especially critical. As the *DIRECTV Petition* illustrates, while it can be shown that it is technically feasible to accommodate tweener satellites -- whether by using larger receive antennas or allowing additional interference to existing nine degree-spaced satellites, or both -- the more important issue is the constraints that tweener satellites would impose on all future U.S. ITU BSS Plan modifications at U.S. BSS Plan assignments less than nine degrees away. If U.S. DBS operators are forced into agreements with foreign administrations to protect foreign tweener satellites from future U.S. modifications, there is a serious danger of precluding the deployment of local channel spot beams on additional frequencies (those not filed with the ITU before the tweeners), since it would be difficult for the high-power spot beams to meet any interference criterion previously established. It could also be very difficult for DBS operators to deploy higher power CONUS satellites that would allow advanced coding and much higher capacities (bits/Hz). Thus, the fundamental point of the *DIRECTV Petition* on the merits is that any attempt to accommodate tweener satellite systems at 12 GHz in the U.S. portion of the geostationary orbital arc must not be permitted to stifle the important public interest benefits that DIRECTV and other U.S. DBS operators currently are pursuing and plan to pursue, such as the continued expansion of satellite-delivered local broadcast channels, the continued rollout of HDTV programming, and the continued development and introduction of innovative new satellites and services by operating DBS systems.

The *DIRECTV Petition* outlines a non-exclusive list of specific considerations and proposals on which the Commission has now solicited comment by reference in the *Public Notice*. And the *DIRECTV Petition* observes that the possibilities that are within the Commission's grasp are significantly more complex than the essentially binary questions posed by recent applications and filings such as the SES Petition. Any authorization of tweener satellites will necessarily require the balancing of important considerations such as service availability, channel capacity, equipment cost, consumer acceptance, and market structure. And among the technical parameters that can vary are orbital spacing, availability, data rate, protection to nine-degree satellites, protection from nine-degree satellites and other tweener satellites, and receive antenna size.[9]

Only after careful and thorough consideration of these tradeoffs will the Commission be in a position to predict whether moving to any form of reduced orbital spacing would serve the public interest. The ITU, after more than five years of study by industry experts, revised the BSS Regions 1 and 3 Plan twice (1997 and 2000) in order to provide more assignments to the administrations of those regions. As a result of these studies, it was determined that, in general, more than six-degree spacing between co- or adjacent-coverage, co-frequency assignments was required to avoid undue interference -- *with 60 cm receive antennas*. Analogously, with 45 cm antennas ubiquitously deployed in the United States and throughout Region 2, a minimum satellite spacing of 7.55 degrees would be required to afford the same interference protection. This obviously is a far cry from 4.5 degree spacing, and, at a minimum, suggests that a tremendous amount of technical work and analysis must occur before any form of reduced orbital spacing is actually implemented in the United States or Region 2. Furthermore, as the

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[9] To illustrate this point, four parametric charts in the *DIRECTV Petition* show trade-offs that can be

DIRECTV Petition has observed, it should not be expected that tweener satellites in *any* scenario should or can be afforded the same operating conditions as systems already operating from the original United States Region 2 BSS Plan assignments (or modifications to these assignments).[10]

DIRECTV appreciates the Commission's commitment to explore "the intensive and efficient use of the spectrum" and to promote MVPD competition.[11] At present, the 12 GHz band is being utilized intensively by U.S. DBS operators today, and is already asked to accommodate four different services – DBS, non-geostationary satellite ("NGSO"), Multichannel Multipoint Video Distribution and Data Service ("MVDDS") and fixed point-to-point microwave. Before imposing the further constraints necessary to accommodate tweener satellites, the Commission should proceed deliberately, and, at a minimum, conduct a comprehensive rulemaking proceeding to determine whether and under what conditions introducing tweener satellites into the 12 GHz band would be a wise policy decision.

Respectfully submitted,

DIRECTV, INC.

By: - /s/ -
Gary M. Epstein
James H. Barker
LATHAM & WATKINS LLP
555 Eleventh Street, N.W.
Washington, D.C. 20005
Phone: (202) 637-2200

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made to facilitate less than nine-degree spaced satellites and still protect existing DBS services.

[10] *See* DIRECTV Petition at 16-18. The Commission has held that even when a foreign satellite service provider has ITU priority, "existing U.S. satellite systems are not required to change their licensed operating parameters to accommodate additional non-U.S. licensed systems." *Pacific Century Group, Inc., Letter of Intent as a Foreign Satellite Operator to Provide Fixed Satellite Services in the Ka-band to the United States,* Order, 16 FCC Rcd 14356 at ¶ 18 (2001); s*ee also*, *Second Round Assignment of Geostationary Satellite Orbit Locations to Fixed Satellite Service Space Stations in the Ka Band*, Order, 16 FCC Rcd 14389 at ¶ 26 (2001).

[11] *Public Notice* at 2.